REPORT

For

OpenPeak Inc.

1750 Clint Moore Rd.
Boca Raton, Florida
33487 United States of America

Date:	December 16, 2009
Report No.:	9628-1E
Revision No.:	0
Project No.:	9628
Equipment:	Energy Frame 7
Model No.:	OPOF7E120

ONE STOP GLOBAL CERTIFICATION SOLUTIONS

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TABLE OF CONTENTS

TEST REPORT		
FCC15 and ICES-003		
Report reference No.	9628-1E	
Report Revision History:	✓ Rev. 0: Dec. 16, 2009	
Tested by (printed name and signature)	Jeremy Lee	
Approved by (printed name and signature)	Kavinder Dhillon, Eng.L	
Date of issue	December 16, 2009	
Note: By signing this report, both the Testing Technician and the Reviewer hereby declare to abide by the applicable LabTest policies: **1.) Statement of Independence # 3014 (LabTest Employees),** **2.) Independence, Impartiality, and Integrity #1039, clause 11 (Engineering Service Subcontractors), or** **3.) Independence, Impartiality, and Integrity #1019, clause 3.5 (Testing Subcontractors).**		
Testing Laboratory Name	LabTest Certification Inc.	
Address	3133 – 20800 Westminster Hwy, Richmond, B.C. V6V-2W3	
FCC Site Registration No.	444229	
IC Site Registration No.	5970B-1	
OATS Test Location Name	LabTest Certification Inc.	
Address	17325-48Ave., Surrey, BC, Canada	
Applicant's Name	OpenPeak Inc.	
Address	1750 Clint Moore Rd, Boca Raton, Florida, 33487, USA	
Manufacturer's Name	Same as Applicant	
Address	Same as Applicant	
Test specification		
Standards	➢ FCC 15, Subpart B: 2008 ➢ ICES-003, Issue 4, February 2004	
Testing		
Date of receipt of test item	Dec. 08, 2009	
Date(s) of performance of test	Dec. 08 to 11, 2009	
Test item description		
Trademark	N/A	
Model and/or type reference	OPOF7E120	
Serial numbers	32092230236	
Electrical Rating(s)	5VDC	

Particulars: test item vs. test requirements	
Equipment mobility .....:	Yes
Operating condition.....:	0 to 55 °C
Mass of equipment (g) .....:	1020
Dimension(Width X Depth X Height)	194 mm X 194 mm X 35 mm
Nominal Voltages for:	_X_ stand-alone equipment ___ combined (or host) equipment ___ test jig
Supply Voltage:	___ AC ____ Amps ___5V___ DC _____Amps
If DC Power:	____ Internal Power Supply __X__ External Power Supply or AC/DC adapter ____ Battery □ Nickel Cadmium □ Alkaline □ Nickel-Metal Hydride □ Lithium-Ion □ Lead Acid (Vehicle regulated) □ Other
Test case verdicts	
Test case does not apply to the test object :	N/A
Test item does meet the requirement .....:	Pass
Test item does not meet the requirement ...:	Fail

General product information:

The EUT can be described as a media phone with Energy applications.
The Frame Base unit has WiFi and Ethernet capabilities for VoIP functionalities. The wireless module used provides 802.11b/g/n WLAN and Bluetooth functions, where the WLAN and Bluetooth coexist and share the same antennas to transmit and receive. The WLAN and Bluetooth implementation uses modular PCIE card connected to the main board. The Ethernet port allows connection to high speed LAN (10/100/1000 Mbps) for data and video transmission.

The build-in ZigBee (802.14.5) hardware on the Frame Base unit (acting as a ZigBee device) allows access to ZigBee networks such as ZigBee enabled utility equipment and systems.

In addition, the Base Station has one USB 2.0 Host port that can be used to interface to home devices such as printers, flash memory stick, or any compatible USB 2.0 device. There is also a stereo audio jack which allows connection to external audio output devices such as speakers.

A 7” LCD with capacitive touch screen provides an intuitive user interface for all the applications that run in the Base.

Frequencies

Module	Signal	Frequences (MHz)
DDR2 with system controller Hub	Bus Clock	266
802.11b/g/n + BT Modular Card with system controller Hub	PCIE	133
LCD with system controller Hub	LVDS	100
Ethernet PHY with system controller Hub	PCIe	100
BIOS with system controller Hub	Bus Clock	33
ZIgbee Coprocessor	UART	24

List of ancillary and/or support equipment provided by the applicant

Model No.	Description	Manufacturer	Approvals/Standards
LFS054000D-A8S	Switching Power Supply	CUI&LF	FCC Part 15 Subpart B Class B, 2007

Description of Interface Cables for Testing

Connected port	Cable Type	Cable length	Ferrite
None			

ARRANGEMENT OF INTERFACE CABLES: All interface cables were positioned for worst-case maximum emissions within the manner assumed to be a typical operation condition (please reference photographs).

Software and Firmware

Description	Version
None	

Worst-case configuration and mode of operation during testing

The EUT was set on the all modules were turning on excepting all transmitter modules, Zigbee, WIFi and Bluetooth.

Modifications Required for Compliance

None.

Test Equipment Verified for function

Model #	Description	Checked Function	Results
R3271	Spectrum Analyzer	Frequency and Amplitude	Connected 25MHz and -10 dBm Cal_siganl and checked OK.
PA-103	Pre-Amplifier, 1 to 1,000MHz	Gain at 30 and 1,000Mhz	Gains were normal.
SAS-542	Anatenna, 30 to 300MHz	Checked structure	Normal – no damage.
SAS-510-2	Anatenna, 300 to 1000MHz	Checked structure	Normal – no damage.
LCI-001	RF Cable, up to 1GHz	Insertion Losses from 30 to 1,000MHz	Losses were normal.
SP-2000-20R	Humidity/ Temperature Logger	Compaired room Temp. and Hum. with another data logger	Working normally

Measurement Uncertainty

Where relevant, the folllowing measurement uncertainty levels have been estimated for tests:

Parameter	Uncertainty(dB)
Radiated Emission, 30 to 300MHz	4.94
Radiated Emission, 300 to 1,000MHz	5.05

Uncertainty figures are valid to a confidence level of 95%.

Markings

Blank

You should refer to the clause of FCC Part 2 Section 2.295 and FCC Part 15 Section 15.19 for information to be contained on the label as well as information about the label. Any other statements or labelling requirements may appear on a separate label at the option of the applicant/grantee.

According to FCC Section 2.925(a),
"(a)Each equipment covered in an application for equipment authorization shall bear a nameplate or label listing the following:
(1) FCC Identifier consisting of the two elements in the exact order specified in §2.926. The FCC Identifier shall be preceded by the term *FCC ID* in capital letters on a single line, and shall be a type size large enough to be legible without the aid of magnification.
Example: FCC ID XXX123. XXX-Grantee Code 123-Equipment Product Code"

According to FCC Section 15.19(a)(3), the following statement must be include on the identification label: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Test Summary

When configured and operated as specified in this report, the product was found to comply with the requirements as indicated below.

Test Type	Regulation	Measurement Method	Result
AC Power Line Conducted Emission	FCC15.107(a), Class B ICES-003, Clause 5.3	ANSI C63.4:2003	N/A
Radiated Emissions-Unintentional radiators	FCC15.109(a), Class B ICES-003, Clause 5.5	ANSI C63.4:2003	PASS

Note 1): Exempted by there was no AC power connector in the EUT. The DC power was supplied by FCC certified power supply, LFS054000D-A8S.

Radiated Emission; Unintentional Radiators

Temperature	0.2 to 0.7 °C
Relative Humidity	72.6 to 75.1 %
Barometric Pressure:	101.24 to 101.36 kPa
Test Date	Dec. 08 and 11, 2009
Sample Number	776656
Calibrated Test Equipment (ID)	112, 152, 227-1, 227-2, 228
Reference Equipment (ID) (Calibration not required)	124, 233, 235
Tested Voltages	110VAC, 60Hz, Single Phase
Tested By	Jeremy LEE

Use the barometric pressure reported at: http://www.theweathernetwork.com/weather/CABC0308

Test Limits

FCC 15.109 (a):
Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of emission (MHz)	Field strength (microvolts/ meter)
30–88	100
88–216	150
216–960	200
Above 960	500

Test Setup

The test was performed in accordance with **FCC 15.109:2008, FCC 15.31:2008, FCC 15.33:2008, FCC 15.35:2008, and ANSI C63.4, 2003.**

Test procedure is based on the FCC15.31(a)(3) - Other intentional and unintentional radiators are to be measured for compliance using the following procedure excluding sections 4.1.5.2, 5.7, 9 and 14: ANSI C63.4–2003: “Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz” (incorporated by reference, see § 15.38). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51.
NOTE to Paragraph (a)(3): Digital devices tested to show compliance with the provisions of §§ 15.107(e) and 15.109(g) must be tested following the ANSI C63.4 procedure described in paragraph (a)(3) of this section.[As stated in the adopting R&O, ANSI C63.4 is not used for measurements below 30 MHz.]

The EUT was placed on a 1 meter by 1.5 meters wide and 0.8-meter high nonconductive table that was placed directly onto a flush mounted turntable. The EUT was connected to its support equipment with any

excess I/O cabling bundled to approximately 1 meter. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna supporter. It was measured with a receiver – spectrum analyzer, which was controlled by special EMC software, TILE4. The antennas were balanced dipoles. For frequencies of 80 MHz or above, the antennas were resonant in length, and for frequencies below 80 MHz it had a length equal to the 80 MHz resonant length.

Tests were performed to determine the worst orientation of the EUT. With the EUT positioned in worst case of operation, emissions from the unit were maximized by manipulating the cables, and by adjusting the polarization and height of the receive antenna and rotating the EUT on the turntable.

- The EUT was set-up laser on.
- The following measurements were made with
    - Span = wide enough to fully capture the emission being measured.
    - RBW = 120kHz(under 1GHz) and 1MHz(over 1GHz).
    - VBW ≥ RBW
    - Sweep = Auto
    - Detecting Method = Quasi peak (under 1GHz) and Averaging (over 1GHz).

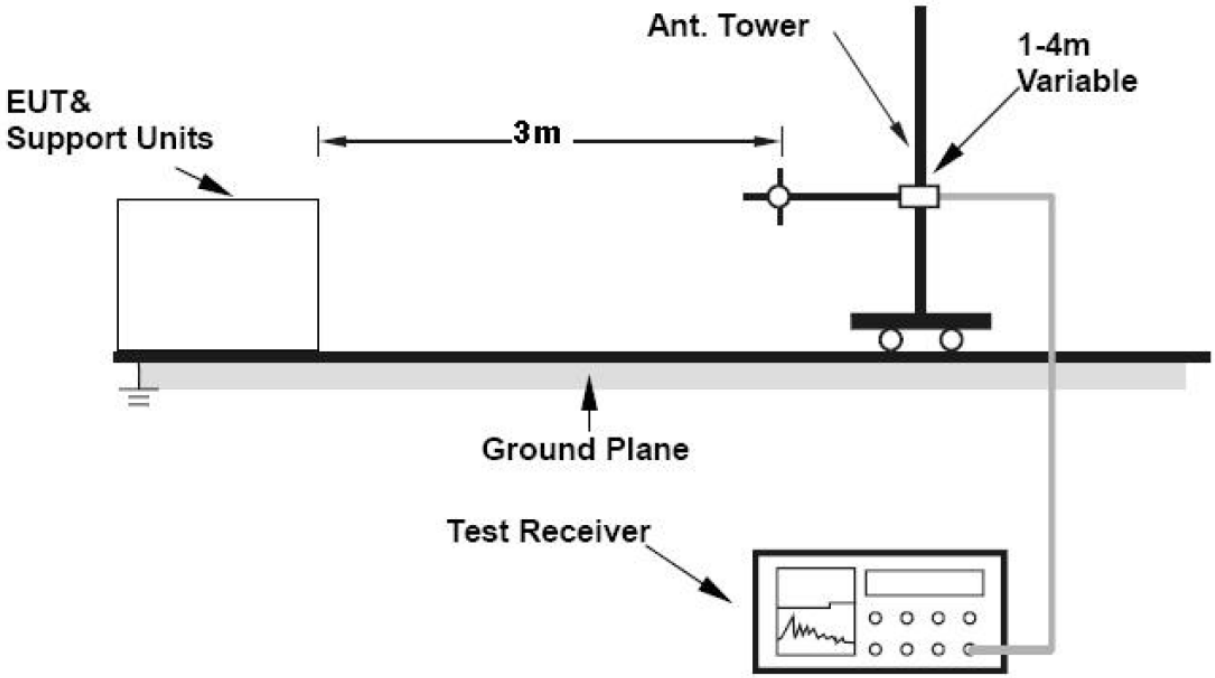
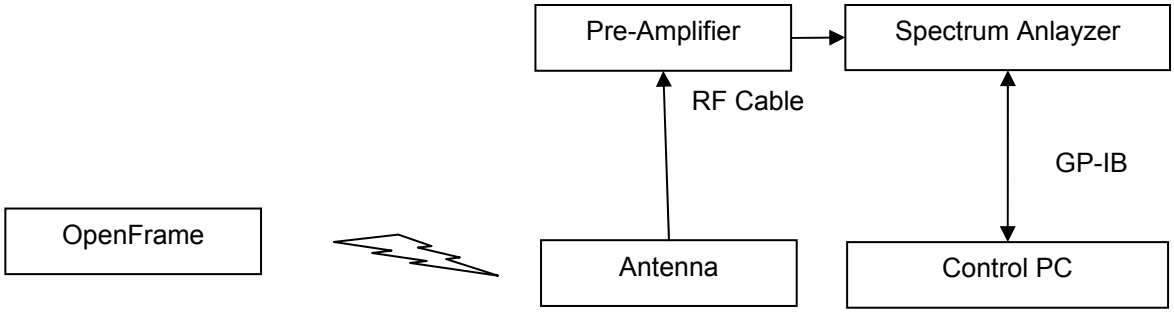


Figure – 1 Test setup for Radiated emissions at OATS

Setup Block Diagram



Test Result

Emission level (dBuV/m) = Quasi-Peak detected level (dBuV) +Cable Loss (dB) + Antenna Factor (dB/m) – Pre-amplifier's Gain (dB)

X Pass Fail N/A

- Table of Radiated Emissions: 30 to300MHz, Quasi-peak Detecting, Antenna was used SAS-542.

LabTest Certification Inc.
Unintentional Radiated Emissions
FCC15.109, Class B, 3 meters, Horizontal

Operator: Jeremy Lee
01:39:23 PM, Friday, December 11, 2009

Model #: OPOF7E120
Contact: Eric Jen
Company: OpenPeak Inc.

Frequency MHz	Measured dBuV	AntFactor dB/m	CableLoss dB	Preamp dB	Emission dBuV/m	Limit dBuV/m	Margin dB	T/T degree	Tower cm	Pol
122.58 MHz	52.81	11.63	3.10	-33.06	34.49	43.52	9.03	253.0	386.8	H

Project # : 9628, Sample #: 776656
Temp.: 0.2 C, Hum.: 72.6 %
Barometer Pres.:101.24 kPa

LabTest Certification Inc.
Unintentional Radiated Emissions
FCC15.109, Class B, 3 meters, Vertical

Operator: Jeremy Lee
01:39:23 PM, Friday, December 11, 2009

Model #: OPOF7E120
Contact: Eric Jen
Company: OpenPeak Inc.

Frequency MHz	Measured dBuV	AntFactor dB/m	CableLoss dB	Preamp dB	Emission dBuV/m	Limit dBuV/m	Margin dB	T/T degree	Tower cm	Pol
122.58 MHz	48.10	11.63	3.10	-33.06	29.78	43.52	13.74	39.8	366.0	V

Project # : 9628, Sample #: 776656
Temp.: 0.2 C, Hum.: 72.6 %
Barometer Pres.:101.24 kPa

- Table of Radiated Emissions: 300 to 1,000MHz, Quasi-peak Detecting, Antenna was used SAS-510-2.

LabTest Certification Inc.
Unintentional Radiated Emissions
FCC15.109, Class B, 3 meters, Horizontal

Operator: Jeremy Lee

Model #: OPOF7E120
Contact: Eric Jen
Company: OpenPeak Inc.

12:41:43 PM, Friday, December 11, 2009

Frequency MHz	Measured dBuV	AntFactor dB/m	CableLoss dB	Preamp dB	Emission dBuV/m	Limit dBuV/m	Margin dB	T/T degree	Tower cm	Pol
572.13 MHz	33.14	19.67	7.21	-32.12	27.90	46.02	18.12	170.4	199.3	H
575.89 MHz	32.66	19.72	7.24	-32.11	27.51	46.02	18.51	199.8	229.2	H
830.77 MHz	30.57	22.24	8.63	-31.72	29.73	46.02	16.29	324.3	357.9	H
832.95 MHz	30.36	22.29	8.64	-31.71	29.58	46.02	16.44	263.4	237.3	H

Project # : 9628, Sample #: 776656
Temp.: 0.7 C, Hum.: 75.1 %
Barometer Pres.:101.36 kPa

LabTest Certification Inc.
Unintentional Radiated Emissions
FCC15.109, Class B, 3 meters, Vertical

Operator: Jeremy Lee

Model #: OPOF7E120
Contact: Eric Jen
Company: OpenPeak Inc.

12:41:43 PM, Friday, December 11, 2009

Frequency MHz	Measured dBuV	AntFactor dB/m	CableLoss dB	Preamp dB	Emission dBuV/m	Limit dBuV/m	Margin dB	T/T degree	Tower cm	Pol
572.127 MHz	35.33	19.67	7.21	-32.12	30.09	46.02	15.93	303.0	101.1	V
575.893 MHz	37.16	19.72	7.24	-32.11	32.01	46.02	14.01	268.9	187.2	V
830.767 MHz	30.44	22.24	8.63	-31.72	29.60	46.02	16.42	108.5	101.3	V
832.948 MHz	30.34	22.29	8.64	-31.71	29.56	46.02	16.46	304.3	257.8	V

Project # : 9628, Sample #: 776656
Temp.: 0.7 C, Hum.: 75.1 %
Barometer Pres.:101.36 kPa

APPENDIX A: Test equipments used for tests

ID No.	Description	Manufacturer	Model	Serial No.	Calibration Date	Calibration Due Date	Calibration Certificate No:	Calibration Laboratory
112	GTEM EMC Chamber	Emco	5317	N/A	04-Oct-2005	04-Oct-2010	1000082343	Wescan
124	Pre-Amplifier	Com-Power	PA-103	161118	N/A	N/A	N/A	N/A
152	Spectrum Analyzer	Adventest	R3271	15050455	05-Nov-2009	05-Nov-2010	295548	Wescan
227-1	Biconical Antenna	A.H. Systems	SAS-542	716	29-Apr-2009	29-Apr-2010	10399EE	A.H. Systems
227-2	LP Antenna	A.H. Systems	SAS-510-2	1262	29-Apr-2009	29-Apr-2010	10399EE	A.H. Systems
228	Humidity/ Temperature Logger	Veriteq	SP-2000-20R	07072157	16-Sep-2008	16-Sep-2009	0133270	Veriteq
233	Coaxial RF Cable	N/A	LCI-001	N/A	N/A	N/A	N/A	N/A
235	Turn table /Tower System	Sunol Sciences Co.	SC104V	031407-1	N/A	N/A	N/A	N/A